

11/25/13 Agenda

- Review Homework - Worksheet 5.1 day 1
- Section 5.1 day 2
 - Finding Rate of Change from a Graph
- Homework - Worksheet 5.1 day 2

5.1 - Finding Rate of Change from a Graph

Warm up:

Find the rate of Change from the following tables

$$\frac{\Delta y}{\Delta x}$$

x	y
0	2
2	3
4	4
6	5
10	7

$R_{ofC} = \frac{1}{2}$

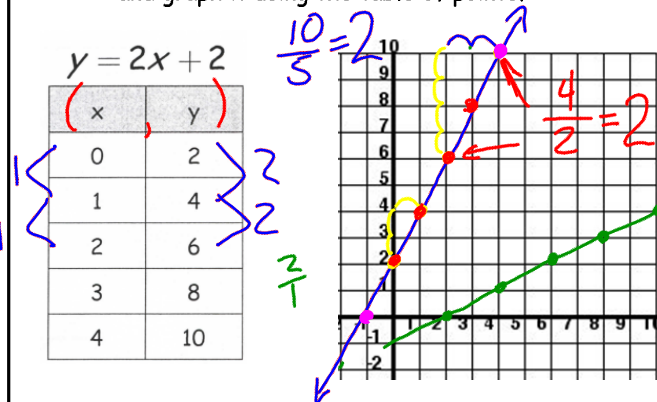
x	y
3	10
4	8
6	4
7	2
8	0

Rate of Change:

Rate of Change is the amount one quantity is changing in relation to another quantity.

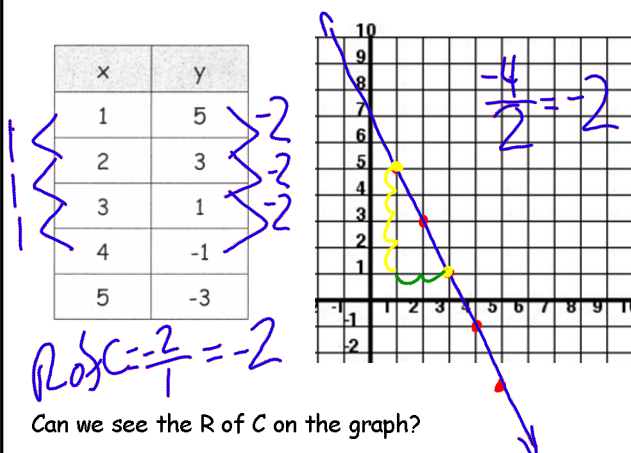
Lets go back to our first example from Friday and graph it using the table of points.

(x, y)



Can we find the change in y and the change in x just by looking at the graph?

Let's look at a negative rate of change:



Can we see the R of C on the graph?

What do you notice about the rate of change when it is negative?

5.1 - Finding Rate of Change from a Graph

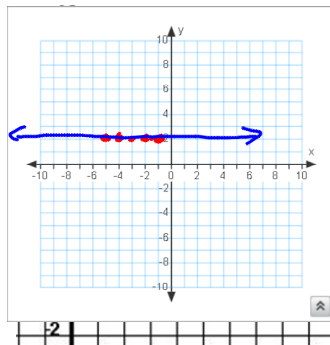
What about these?

HORIZONTAL
LINE

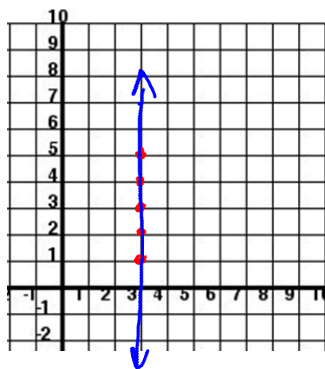
$$\frac{0}{1}$$
 $R \circ f \subset C$ ~~$\frac{1}{0}$~~

VERTICAL
LINE

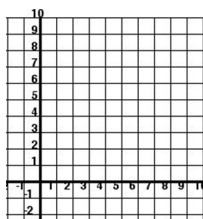
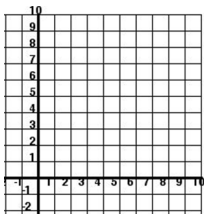
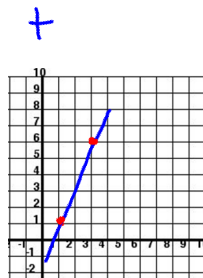
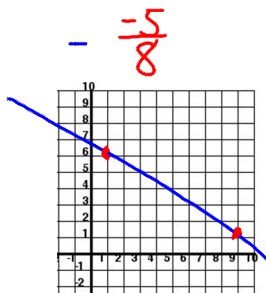
x	y
-5	2
-4	2
-3	2
-2	2
-1	2



x	y
3	1
3	2
3	3
3	4
3	5



R of C on a graph:



SLOPE

5.1 - Finding Rate of Change from a Graph

Slope:

is the rate of change of a line

Slope
Formula:

$$\frac{y_2 - y_1}{x_2 - x_1} = m$$

POINT 1
POINT 2
↓
↓
 x_1, y_1
 x_2, y_2
 $(2, 3)$
 $(4, 7)$

Larking
Method
(stack &
subtract)

$$\frac{7-3}{4-2} = \frac{4}{2} = 2$$

Find the rate
of change:

(2, 3) (4, 7)

(10, 2) (6, 4)

(this is the same
thing as finding
the *slope*!)

(1, 4) (0, 2)

(5, -2) (5, 3)

(3, 6) (4, 7)

(10, -2) (3, -2)